COYOTE CREEK - A LEGACY OF CHANGE

By Michael Rigney¹, Director, Coyote Creek Riparian Station

Coyote Creek has undergone tremendous change within the last five years - all brought about by the hands (or more properly, the equipment) of man. Massive levees 14 feet high now encircle the river. Where large continuous stands of stately cottonwoods and willows once lined the banks on both sides, in some areas, these trees have been replaced by rock-lined cavities called "cross-overs". Where once a meandering channel wound its way leisurely to the Bay, a straightened, more orderly channel now flows in an entirely new way. A salt pond, in operation since the 1920's, was sliced nearly in half by a new levee and a football field-sized sludge lagoon, owned by the City of San Jose disappeared completely.

Not many will mourn the loss of a portion of a salt pond and fewer still will be upset over the taking of a sewage sludge lagoon. It is, however, quite another matter when old growth riparian habitat is lost - trees and shrubs which support teeming populations of wildlife and provide oxygen for our embattled atmosphere, shade for our beleaguered fisheries.

After many years of drought, it is hard for many of us to relate to the fact that most of Santa Clara Valley lies in a massive floodplain. One of the reasons agriculture flourished here for so long was because of the fertile soils deposited by many centuries of silt-laden waters escaping the banks of our rivers and streams. As these floodwaters broadened they also slowed, allowing the fine silts to settle out - layer upon fertile layer. After many years of drought, it is hard for many of us to relate to the fact that most of Santa Clara Valley lies in a massive floodplain. One of the reasons agriculture flourished here for so long was because of the fertile soils deposited by many centuries of silt-laden waters escaping the banks of our rivers and streams. As these floodwaters broadened they also slowed, allowing the fine silts to settle out - layer upon fertile layer.

The early residents of the San Francisco Bay, the Ohlone Indians, understood the need for mobility during the winter rainy season, moving their camps to higher ground when rain-swollen creeks threatened to rebel against confinement. Early farmers, Spanish and Mexican settlers, also excepted the inevitability of winter flooding.

¹ This article could not have been written without the help of Cindy Roesser, Assistant Environmental Specialist, Santa Clara Valley Water District and Linda Spahr, Revegetation Specialist, Habitat Restoration Group.

A CREEK WITH A HISTORY OF REBELLION

This article is an attempt to provide some perspective on what has come to be known as the "Coyote Creek Flood Control Project."
However, as agriculture became a dominant force in Santa Clara County's economy, both the development of water delivery systems and protection of valuable crop lands from periodic flooding became important. Some of the first irrigation canals were constructed in the Evergreen area of San Jose in the 1850's. About the same time, farmers began building makeshift levees around rivers and streams to contain the sometimes rebellious flows within the river's natural channel.

As agriculture pushed closer to the fringes of San Francisco Bay, additional useful land was gained by clearing the floodplain of unwanted trees and shrubs. Willow thickets were cut down or burned; large stands of Valley and live oaks were cut down for firewood and to yield additional cropland; small meandering tributaries of the main river channel were dammed and filled to yield still more land for crops.

Wells were sunk into the Valley's extensive shallow aquifer system. In many places wells were not even necessary since artesian springs literally gushed from the porous rock of the Mount Hamilton Range.

**THE NEED FOR FLOOD CONTROL**

This process continued unabated, and for the most part, undocumented well into the early 1900's. Soon, the Santa Clara Valley became known throughout the world for its lush fruit orchards, vineyards and farms. In 1911, a series of enormous storms dumped huge quantities of water into both Coyote Creek and Guadalupe River causing both streams to overflow their banks. Many acres of farm-land and most of "downtown" San Jose were engulfed in raging flood waters (U.S. Army Corps of Engineers, 1970). Agricultural interests and the developing business community in San Jose attempted to form a water and flood control agency soon after the disastrous floods of 1911, but World War I intervened. It was not until 1929 that a local water agency (the Santa Clara Valley Water Conservation District) was given voter approval (Melton. 1978).

One of the first tasks of this new water conservation district was the design and construction of the Valley's first reservoir system. One of first of six dams built by the District was the Coyote Dam and reservoir near Morgan Hill. This reservoir was designed to contain and store runoff from the Mount Hamilton Range. It also provided some flood control protection for the increasing number of residences and businesses being built in the floodplain of Coyote Creek.

San Jose and the surrounding communities continued to prosper. Agriculture continued to flourish, using more and more water for irrigation. At the same time, Santa Clara Valley began developing a manufacturing base and with that base came more workers and increased demands for household and manufacturing uses of water. Gradually, imperceptibly at first, but with ever increasing magnitude, the ground under many portions of the Santa Clara Valley began to sink. So much water was being withdrawn from shallow underlying aquifers (on which the ground literally floated), that from 1916 to 1975 north San Jose sunk 12.7 feet (Poland and Ireland. 1980).

In April of 1958, when subsidence was occurring at a rapid rate, another series of major storms hit the San Jose area. Coyote Creek and Guadalupe River again jumped their banks but this time much of the rapidly urbanizing area of San Jose was 5 to 11 feet lower than it had been in the major storms of 1911. Major flood damage occurred. Estimates ranged from $30 to $50 million in property damage.

This flood prompted a major flurry of flood control projects initiated by the recently (1951) formed Santa Clara County Flood Control and Water Conservation District. Many of the smaller streams which crossed the valley floor were straightened and lined with concrete to allow for efficient removal of stormwater runoff. Runoff from streams was also on the increase because so much of the Valley's once fertile soil had been covered by houses, factories, roads and other impervious surfaces. Rainwater was now funnelled into storm drains which emptied directly into creeks and streams. This caused high, short duration peak flows which most of the natural streams could not handle within their main channels. Taken together with the fact that the ground was now 5 to 12 feet lower, much of Santa Clara County was in imminent danger of flooding.

One other factor also contributed to the Valley's precarious flood situation. Prior to 1930, when runoff carried by streams and creeks reached the extensive marshes bordering the San Francisco Bay, it flowed through countless small tributaries and onto marsh plains allowing the fast moving water to slow, drop sediments and disperse, thus lessening the streams tendency to jump its banks and flood adja-
between 5 to 11 feet. The rapidly expanding San Jose urban area had allowed housing and industry to occupy land known to be susceptible to flooding. Increased urbanization contributed also to increased storm water runoff into all major rivers and streams, but Coyote Creek had managed to escape major channelization activities - so widespread during the early "boom years" of the 1960's and 70's. Heavy rains in 1982 had left Coyote's upstream reservoirs (Anderson in particular) filled during much of the dry season and early rainy season. The marshes near the mouth of Coyote Creek (which historically had dispersed and slowed Coyote's flood waters) had long since been converted to salt ponds, sludge drying lagoons for the Cities' of San Jose and Santa Clara sewage treatment plant, and dumps.

THE STAGE IS SET FOR EL NIÑO

Many different factors conspired to produce record flooding of Coyote Creek in March, 1983. Subsidence had lowered ground levels adjacent to Coyote Creek between 5 to 11 feet. The rapidly expanding San Jose urban area had allowed housing and industry to occupy land known to be susceptible to flooding. Increased urbanization contributed also to increased storm water runoff into all major rivers and streams, but Coyote Creek had managed to escape major channelization activities - so widespread during the early "boom years" of the 1960's and 70's. Heavy rains in 1982 had left Coyote's upstream reservoirs (Anderson in particular) filled during much of the dry season and early rainy season. The marshes near the mouth of Coyote Creek (which historically had dispersed and slowed Coyote's flood waters) had long since been converted to salt ponds, sludge drying lagoons for the Cities' of San Jose and Santa Clara sewage treatment plant, and dumps.

For four consecutive days in late February, rain fell almost ceaselessly and Coyote Creek began to rise. March 1 and 2 a total of six inches of rain caused Coyote Creek to jump its banks near what is now CCRS's headquarters and at another location upstream at Agnews State Hospital. On March 3 the town of Alviso was flooded with areas west of the Southern Pacific rail line submerged to a depth of seven feet. The flood forced the evacuation of as many as 5,000 people. By the time the flood waters receded or were pumped out (the areas west of the railroad tracks had to be pumped out since, at the time, there was no outlet to drain waters from this artificial basin) an estimated $6.0 million dollars in property damage had resulted (U.S. Army Corps of Engineers. 1977).

Although preliminary planning for a flood control project had begun as early as 1948, serious progress was not made until the 1969 flood. The 1983 flood kicked the
process into "high gear". Other plans were considered during the lengthy environmental and economic review process. The least environmentally damaging alternative entailed a one bank widening with an overflow channel on only one side. This alternative, however, was deemed vastly more expensive because of differing land values in certain areas within the project corridor. Economic considerations, in this case, were too compelling. Conversely, plans were investigated which were much more environmentally damaging than the chosen alternative. These included extensive areas of channel reinforcement (sack concrete or trapezoidal concrete channel) which would not necessitate acquisition of land for use as overflow channel.

The final plan chosen by engineers from both the U.S. Army Corps of Engineers and the Santa Clara Valley Water District (the local project sponsor) made use of an overflow channel on alternating sides of the creek and a system of earthen levees. This plan would protect the majority of the riparian vegetation but wherever the overflow channel was taken from one side of the creek to another (alternated) all vegetation at the "cross-over" would be removed and the channel lined with rock rip-rap to allow for efficient passage of water during flood events. Also this plan entailed "straightening" several sections of the creek which also necessitated removal of vegetation. In the end, it was determined that 32 acres of newly created riparian habitat would compensate for the loss of 5.6 acres of the same habitat type.

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reduce habitat for two candidate species for endangered status - the Salt Marsh Yellowthroat and Tricolored Blackbird. The necessity to mitigate for the loss of habitat for these critical and declining species was also incorporated into the developing plans for the emerging flood control project.

In October, 1984, the Santa Clara Valley Water District's Environmental Impact Report for the Lower Coyote Creek Flood Control Project was published but it was not until January, 1987 that the Final Environmental Impact Statement produced by the U.S. Army Corps of Engineers was finally completed and adopted.

**WORK BEGINS**

Although a small test levee through a corner of the Leslie Salt pond was actually the first construction activity to occur in late 1985, the first notable event in the saga of Coyote Creek flood control was positive - the installation of the 4-acre Pilot Revegetation Plot. Before a tree was ever uprooted in the name of flood control, nearly 4,000 trees and shrubs of 16 species were planted on a 4.4 acre plot adjacent to Coyote Creek in the winter of 1986-87.

This pilot project served not only to compensate for habitat loss which was soon to occur as the flood control project got into full swing, but it also to provided the District's biologists and consultants with badly needed information on watering techniques, the best plant propagation types (or propagules) to use, and which plant associations provided the best wildlife habitat. Coyote Creek Riparian Station was awarded a contract to set up a monitoring scheme which would allow the District to determine if the methods they used on the pilot site were effective in restoring valuable riparian habitat, how long it might take, and, if problems were noted, how to make adjustments in future revegetation efforts. CCRS is now in the process of compiling a report on our first five years of annual wildlife monitoring on this pilot revegetation project. We will be summarizing our results of this important work in upcoming newsletter issues.

Construction of major flood control features near the mouth of Coyote Creek (given the designation Reach 1) began in earnest in the summer of 1988 and continued through the summer of 1989. During this phase of construction, a broad flood plain was created near the mouth of Coyote Creek and the ground was lowered to handle more water and slow it down during periods of peak flows. In addition, the creek channel itself was realigned and a series of islands were created in the middle of the creek channel.

It was during this phase of the project that the shorebird pond, which has attracted so many unusual shorebirds over the past few years, was constructed. Beneath the surface of this pond lies a portion of the old creek channel which formed a large "oxbow".

Construction in Reach 2 (areas upstream of the Waterbird Pond and Delta) began in the winter of 1990 and continued through late summer of that year. Those of us who were working at the Station during that time remember, with mixed emotions, watching (and dodging) the bulldozers as they ran rampant through willow thickets and dense riparian groves. At the same, we also watched CCRS's new building pad, high above the flood plain, take shape.

Shortly after construction was complete, Water District personnel were hard at work replanting vegetation to provide shade for fish and cover for wildlife. Unfortunately, the continuing drought stymied...
**Seasonal Lake**
A deep water lake is created each summer in the "delta" area to provide rearing habitat for any steelhead young which may have survived migration downstream from headwater spawning areas.

**Seasonal Dams**
A series earthen dams are placed across Coyote Creek each year from mid-May to mid-October to provide a deep, cool "lake" for developing steelhead and salmon fry before they return to the sea.

**Waterbird Pond**
This shallow-water pond was created to mitigate the loss of salt pond habitat. Water and salinity levels are maintained by COCERS personnel to provide high quality feeding and roosting habitat for shorebirds during the spring, summer and fall. During the winter, pond level is raised to provide habitat for wintering waterfowl.

**Nesting Island**
This island was created in the waterbird pond to provide nesting habitat for waterfowl and shorebirds such as American Avocets, Black-necked Stilts.

**Delta Islands**
These two islands were created to provide nesting and roosting habitat for birds (particularly the Salt Marsh Yellowthroat and Tricolored Blackbird) and to provide a substrate for planting trees which will provide cooling shade for the "seasonal lake".

**Levee Slope Restoration**
The levee slopes in the vicinity of salt marsh harvest mouse habitat have been planted with native annual and perennial species to provide levee slope stabilization and also cover and food for harvest mice during periods when the marsh plain is flooded. In areas not associated with harvest mouse habitat, the levee slopes are being revegetated with native shrubs to provide general wildlife cover. Adjacent to the main channel in the "Delta" area, levee slopes are being managed to provide nesting habitat for Salt Marsh Yellowthroats and Tricolored Blackbirds - both Candidate species for Threatened or Endangered status.

**Salt Marsh Harvest Mouse Restoration Area**
A former sludge drying lagoon and storage yard for a charcoal briquette factory were lowered to carry flood waters during storm events. These areas are also being planted with pickleweed to enlarge the area of suitable habitat for the salt marsh harvest mouse.

**Remnant Marsh**
A remnant population of the federal and state listed endangered salt marsh harvest mouse was discovered in this marsh during preparation of the final Environmental Impact Report. As a consequence, this area was preserved and will be enhanced to control invasive weeds which may crowd out remaining pickleweed plants.

**Salt Pond**
A portion of an existing salt pond was returned to tidal action after a new flood control levee, just off the photograph, bisected the pond. Small nesting islands were created by dredging "gaps" in the outboard levee.

**Water Control Channel**
A series of channels were constructed to allow water taken from the Waterbird Pond or from Coyote Creek to flood the salt marsh harvest mouse area during certain times of the year.
Crossover
Area where flood flows from overflow channel "cross over" from one side of the creek to the other. These areas must be cleared of vegetation and reinforced with rock to prevent erosion. It is at these crossovers that most of the losses in riparian vegetation associated with the flood control project occur.

Fish Shade Restoration
Many native fishes (especially salmon and steelhead) require cool water temperatures during the warmer months. SCWWD has planted cottonwoods and willows at the ends of the crossovers to provide additional cooling shade.

Setback Area Revegetation
A number of areas within the existing riparian corridor lacked dense vegetation. In an effort to fill in some of these gaps with riparian species, SCWWD biologists identified and marked candidate areas. CCRS volunteers planted nearly 1,000 native trees and shrubs and will be maintaining these "setback" plantings for one year.

Pilot Revegetation Site
Planted in 1987, this 4.4 acre plot was used to test a variety of different planting and irrigation methods. During the past five years since the site was planted, CCRS has been monitoring wildlife populations in the existing adjacent riparian corridor, the pilot revegetation plot and adjacent areas of the overflow channel.

Revegetation Site 2
This "snake-shaped" 10 acre site will be planted sometime in 1993 with native riparian trees and shrubs. Wildlife monitoring will be conducted on this site also but less intensively than the Pilot Site.
change occur is that we need not sacrifice completely river and stream ecosystems in the name of property protection and urban growth. Proper planning, however, is the key to riparian preservation. In many areas of the county, development has been allowed right up to the very bank tops of many of our creeks. A situation such as this affords Water District engineers few opportunities to provide flood control protection such as we have seen along Coyote Creek. Short of buying up large and expensive tracts of residential or industrial land, engineers are forced to resort to in-channel "improvements" which generally mean large amounts of concrete and rock, or, at the very least, periodic clearing of vegetation.

Efforts to replant the second major revegetation plot. It was also some time before cover (mostly in the form of non-native invasive weeds) was re-established in the denuded overflow channel.

This year, CCRS volunteers became active in the revegetation of Coyote Creek. Funded by a contract with the Water District, CCRS volunteers planted nearly 1,000 native trees and shrubs at 10 sites along about a mile stretch of Coyote Creek. These areas, called setbacks, were mentioned specifically in the E.I.R. and subsequent permits, as areas to be revegetated to provide additional cover for birds and other wildlife. (See accompanying article by Elinor Spellman in this issue.)

Coyote Creek is now in the midst of another unsettling phase of construction as work nears completion on Reach 2B (upstream to Highway 237). As was the case during earlier phases of construction, the creek bears little resemblance to the creek to which we have all become accustomed.

It should be noted, however, that during February and March of this year, when unusually heavy rains pushed flood waters over the banks of Coyote Creek, the newly installed levees and overflow channels performed their duties flawlessly, and the town of Alviso was spared yet another period of expensive cleanup and rebuilding.

WHAT'S IN STORE FOR THE FUTURE

Coyote Creek and its surroundings have changed greatly in the past few years. And one thing which we have all come to learn through the process of watching
We decided at the start of the year that our first step would be to establish priorities for the blocks that must be covered in our final year. As a basis for setting the priorities, we estimated what species we "expected" in each block. In some cases this estimate was an educated guess, but in other blocks it was developed by careful analysis of topographic maps and comparisons to other blocks where there was significant coverage of similar habitats.

Once we had obtained our expected species list we then calculated the percentage of those species that were Confirmed in each block and also the percentage that were either Confirmed, Probable, or Possible. We plotted the percent CO/PR/PO as a function of the percent Confirmed as shown in Figure 1 for all of the atlas data except Region Two. We also show a fit of these data that represents our combined atlas experience.

The data in the figure show two things. First, it is always easier to find Possible or Probable evidence than to Confirm breeding. This was no big surprise. By the time we have met our goal of 50% Confirmed species we have normally found 87% CO/PR/PO species. Second, our coverage in Regions one, three, and four is quite good - the problem for our final year is to obtain similar coverage in Regions five, six, and seven.

We established our priority list for the final year by dividing the blocks with less than 50% Confirmed species into five categories. Those blocks with less than 15% CO or 52% CO/PR/PO were classified as "priority one", those with less than 25% CO or 68% CO/PR/PO were "priority two" and so forth. One additional modification to this priority listing was how we treated edge blocks. If the amount of Santa Clara County in a block was less than 30% we added two points to the priority score. Thus, a priority one block is moved to priority three for an edge block with little county land. If the county land was greater than 30% but less than 70% a single point was added to the priority score.

Once we had prioritized the blocks with inadequate coverage, we were ready to deal with the other two issues, access to private land and volunteer time. We contacted land owners, when we could find them, by phone, letter, or through friends and acquaintances. Always a slow process, we were amazingly successful in Region Six where regional coordinator Mike Rogers was our charming pointman and successfully opened up the entire region. We did not do so well in Region...
there were only 5 priority one blocks remaining - and each of these was a block we have been denied access. Fourteen blocks remained at priority one to three level and there is a good chance that a few of these will move to priority four status before the end of the atlasing season. This has been an incredible effort on the part of many devoted volunteers. Each of the atlasers has a story to tell and some of these will be shared in future issues of RipariaNews.

Seven where landowners along the Stanislaus and San Benito County lines have been unwilling to let us on their land. In addition, the owners of a block in the southern Santa Cruz Mountains that has no public access have also refused to allow us on their property. Despite these setbacks, the efforts of our atlases have been astounding. At the start of the year, 28 blocks were at the priority one level and a total of 54 blocks were either priority one, two, or three. As of the end of July, gasoline pump is used to lift water from the creek into a 275 gallon tank (a used wood glue container) mounted on a trailer which is then driven to the individual sites. A small battery powered pump is then used to deliver water from the tank to each plant basin. If this sounds like a lot of work - it is. We are all happy and encouraged by the fact that the plants and trees have thrived under our care. We will also be happy when fall and winter provide cool weather and the rains (hopefully!!) enable us to reduce watering.

CCRS has benefitted from carrying out this project, first, because we learned how to install and care for native plants, and second, we learned that we have enough willing and able volunteers to carry a project like this through. An additional benefit is the pleasure of watching the re-introduced native plants (approximately 1,000) thrive in areas that formerly were covered mainly by non-native invasive plants and grasses. In fact, our success has been so great that we have 

### VOLUNTEERS UNDERTAKE HABITAT RESTORATION

By Elinor Spellman

This spring, a dedicated band of CCRS volunteers prepared and planted ten sites along the west bank of Coyote Creek with a mix of 17 different native trees, shrubs and herbaceous plants. These ten sites comprised areas of the existing riparian corridor that were relatively open or barren of native vegetation.

Except for cuttings of California Blackberry, mulefat and arroyo willow, and transplants of beardless wild rye, all plants were supplied by the Santa Clara Valley Water District. Preparation, planting and maintenance of the sites (which encompass nearly 1/2 acre) is being done under contract to the Water District.

The first planting took place on February 23. Heavy rains in March and April, and the necessity of having some rubble and heavy scrap cleared from one of the sites, caused some delays. The last area was planted on April 26.

We followed specifications prepared by the Habitat Restoration Group for construction of planting basins, planting methods, preparation of wire browse-guards for willows, and collection of pole cuttings on site. We will provide maintenance of each site (consisting mainly of periodic weeding and watering) for one year. For the most part it has been possible to control weeds by having volunteer groups come out on an occasional basis to spend a morning working at for or five sites. The watering is done on a weekly basis by Bruce Kato, of our CCRS staff and by volunteers. A gasoline pump is used to lift water from the creek into a 275 gallon tank (a used wood glue container) mounted on a trailer which is then driven to the individual sites. A small battery powered pump is then used to deliver water from the tank to each plant basin. If this sounds like a lot of work - it is. We are all happy and encouraged by the fact that the plants and trees have thrived under our care. We will also be happy when fall and winter provide cool weather and the rains (hopefully!!) enable us to reduce watering.

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Volunteers prepare one of the ten sites for planting. Photo by David Johnson.
COME TO AVOCET FESTIVAL '92

By Kristin Shields

CCRS will be participating in Avocet Festival '92 - San Francisco Bay National Wildlife Refuge's Annual Wildlife and Nature Arts and Crafts Sale to be held at the Refuge Headquarters in Newark on November 7 and 8 from 9 am to 5 pm. In addition, to the arts and crafts, an Environmental Fair will include wildlife programs such as bird banding, bird walks, nature walks, films and videos. Many Bay Area environmental groups, including CCRS, will be recruiting new members and providing information tables on topics ranging from coast cleanup to the ecology of San Francisco Bay. A raffle of donated items will also be held.

This is the perfect opportunity to buy beautiful wildlife arts and crafts for yourself or wildlife lovers on your gift list. We will be signing up new members and selling T-shirts, and patches. Come out and support CCRS and make it a successful fair for everyone. If you would like to spend some time at our booth give Kristin Shields a call at (408) 262-9204.

San Francisco Bay Wildlife Society presents:
AVOCET FESTIVAL '92

featuring
12th Annual Wildlife and Nature Arts and Crafts Sale
Saturday and Sunday, November 7 & 8
9:00am to 5:00pm
San Francisco Bay National Wildlife Refuge
One Marshlands Road, Fremont
(Exit Thornton Ave. off Highway 80, east end of Dumbarton Bridge. Follow Thornton south one mile to Refuge entrance.)

Pottery • Paintings • Photography • T-Shirts
Wood Sculpture • Jewelry • Raffle • Food
Environmental Fair • Wildlife Programs
and More!

Help finance 1993's nature programs at the Refuge by doing your Christmas shopping early! At the same time, enjoy some of the fine educational activities that are part of Avocet Festival '92!

Co-sponsored by:
* Santa Clara Valley Audubon Society
  * Ohlone Audubon Society
  * Tri-City Ecology Center
  * Citizen's Committee to Complete the Refuge

Phone (510) 392-4275 for information

Staff members Chris Otahal, Jake Rigney and Bruce Katano also contributed their time and talents. Bruce Katano shared the weekly watering responsibilities.

Bander Training Class

A new training class for prospective banders begins October 29. Come and learn the skills you need to become a volunteer bander at CCRS. In this exciting course you will learn how to identify birds in-hand, how to age and sex them, as well as make various body measurements. The class runs for three weeks with one evening and one weekend day lecture and field sessions. Call Kristin Shields at CCRS (408) 262-9204 for more information.

To date, in excess of 400 person/labor hours have been spent on the project by volunteers and CCRS staff. The plants and wildlife owe their thanks to the following dedicated volunteers:

John Allen
Virginia Bischoff
Marilyn Bunzo
Cynthia DiGiovanni
Jerry Ellis
Dave Grover
Carol Harris
Tracy Hemmeter
Virginia Langdon-Lassagne
Chris Lonowski
Ken McKinsey
Laura Mello
Gwen Parker
Paul Robertson
Kate Sturtevant
Fern Walters

The plants and wildlife owe nowhere near the margin for cases allowed by the Water District. By next spring, when the plants have been in the ground for one year, they should be so well established that they will be able, on their own, to withstand re-colonization by non-natives.
NEW MEMBERS

We wish to welcome the following new members who joined CCRS in recent months.

Jea Able
Jane and William Becker-Haven
Will and Margaret Bechart
Sandip Bhattacharya
Chris Bloxsom
Jack and Lexie Fry
Diane Dube
Amy Evans
Arleen Feng
Mary Fernandez
James and Carolyn Hammond
Mark and Patty Hermann
Barbara Hoover
Kathleen Human
Dorothy Johnson
Eric Johnson
Joan Kaeler
Lexine Killian
Virginia and Barry Langdon-Lassagne
David Lee
Nick Lethaby
John McLemore and Clysta Seney
Native Revival Nursery
Randi Nedom
Virginia Reynolds
Eric Rosenblum
Jim Royer
Bob Royer
Mark and Sharon Sheeler
Katie Sieving
Linda Spahr
Joyce Swierbut
M. Zellinger

MEMBERSHIPS IN CCRS

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*Or in 4 or installments

Life Membership payments and 10% of all other membership payments and general contributions go into the CCRS Endowment Fund. CCRS is a non-profit corporation with U.S. and California tax exempt status. Five dollars from the dues of each CCRS-SCCBS Atlas Membership goes to the Atlas program. We acknowledge Memorial contributions in RipariaNews. We welcome bequests, including those of real property.

RipariaNews is published quarterly for the information of our CCRS membership, the personnel of the several cooperating federal, state, and local agencies, and for other organizations and individuals concerned with the flora and fauna of riparian and wetland habitats.

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SCVAS NATURE SHOP

The Santa Clara Valley Audubon Society Nature Shop will open on the following Fall Saturdays: November 14, 21, and 28 and December 5, 12 and 19 for holiday shopping. The Nature Shop was established to raise money for SCVAS activities in Santa Clara County. Each Nature Shop purchase supports SCVAS conservation, environmental education and research programs.

The Nature Shop carries everything a wild bird fancier might need in a wide selection of birding-related merchandise.

For more information about the Nature Shop call Cecily Harris at 408 252-3747 or stop by. SCVAS Nature Shop is located in the Cupertino Environmental Center 22221 McClellan Road.

Coyote Creek Riparian Station is a non-profit California membership corporation with United States and California tax exempt status. CCRS is dedicated to research on, and the restoration and management of, riparian and wetland habitats.

Coyote Creek Riparian Station operates in cooperation with the Santa Clara Valley Water District, San Jose/Santa Clara Water Pollution Control Plant, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the San Francisco Bay National Wildlife Refuge.

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